

performance of existing services, such that the incumbent can deny the competitor's request.¹⁸⁴ We do not believe this will be a problem until advanced services penetrate a significant portion of the market and expect incumbents to manage binder groups in such a manner so as to maximize the number and types of advanced services that can be deployed.¹⁸⁵

77. We recognize further that the standards development process may delay the deployment of new technologies. To address this difficulty, we encourage the industry to apply a "test and see" strategy, which would allow competitive LECs and incumbent LECs to cooperate in testing and deployment of new services.¹⁸⁶ We find that this strategy will encourage innovation and allow for the more rapid deployment of new technologies. Our hope is that all providers recognize that cooperation is essential in this future shared environment.

V. Further Notice of Proposed Rulemaking

A. Spectrum Compatibility -- Long-Term Standards and Practices

1. Overview

78. In the *Advanced Services Order and NPRM*, we requested comment on loop spectrum issues. We asked commenters to address any degradation of service that may result from provision of advanced services using different signal formats on copper pairs in the same bundle.¹⁸⁷ In the Order above, we establish spectrum compatibility and management rules to the extent currently feasible in order to promote the timely deployment of advanced services without significantly degrading the performance of other advanced services or traditional voice band services.¹⁸⁸ These rules rest upon currently established technical standards and practices. We recognize that, in the long term, more comprehensive technical standards and practices must be developed. We therefore adopt this Further NPRM, through which we hope to resolve, in a timely manner, the host of long-term spectrum compatibility and management issues.

¹⁸⁴ We seek comment in the Further NPRM on the specifics of binder group management. *See infra* para. 86.

¹⁸⁵ We recognize, of course, that early attention to binder group management issues will guard against problems arising as advanced services reach higher penetration. We seek comment on managing binder groups in the Further NPRM. *See infra* para. 86.

¹⁸⁶ *See supra* para. 68; *see also* GVM Comments at 12 (advocating "test and see" approach). A "test and see" strategy refers to a process by which the incumbent LEC and competitive LEC cooperate in testing new services to determine whether these services may result in interference problems.

¹⁸⁷ *Advanced Services Order and NPRM* at para. 159.

¹⁸⁸ *See supra* paras. 63-77.

2. Discussion

79. In the companion Order, we find that incumbent LECs may not unilaterally set spectrum compatibility and spectrum management policies.¹⁸⁹ In place of incumbent LEC-determined standards and practices, we found in the companion Order that there should be a competitively neutral spectrum standards setting process to investigate the actual level of interference between technologies to determine what technologies are deployable and under what circumstances.¹⁹⁰ In this Further NPRM, we tentatively conclude that this process should include the active participation of the incumbent LECs, competitive LECs, equipment suppliers, and the Commission. We further tentatively conclude the following: the process should be competitively neutral in both structure and procedure; representation should be equitably spread over all segments of the industry; and representatives should have equal authority, with no party or groups of parties presuming to have greater weight or "veto" power. We seek comment on these tentative conclusions and how to establish such a process to develop long-term standards and practices. We also seek comment on our authority to direct industry bodies to engage in the process of developing spectrum compatibility and management policies, and our authority to compel industry bodies to adhere to any requirements we establish for the functioning of such bodies.

80. In this Further NPRM we seek comment on two broad and interrelated issues: spectrum compatibility and spectrum management. With regard to spectral compatibility, we generally believe, as indicated in the accompanying Order, that the industry, via its standards bodies, can create acceptable standards for xDSL and other advanced services. Much of the standards development process is continuous in nature, and our hope is that the industry will fairly and expeditiously develop standards beyond completion of this proceeding. Future technologies will require the T1E1.4, or other standards bodies, to develop these compatibility standards in a timely, fair, and open manner. We believe, however, that the Commission can play a role in fostering timely, fair, and open development of standards for current and future technologies.

81. We seek comment on the best process or forum for developing future power spectral density (PSD) masks. We tentatively conclude that T1E1.4 is the best choice for this task.¹⁹¹ Commenters have expressed concern, however, that T1E1.4 is not representative of the developing advanced services industry as a whole and may be overly represented by incumbent carriers and large manufacturers.¹⁹² We seek comments on how to foster broader representation and participation in this standards body. We also ask commenters to suggest

¹⁸⁹ See *supra* para. 63.

¹⁹⁰ See *supra* para. 63; see also NTIA Jan. 11, 1999 *Ex Parte* at 25-26.

¹⁹¹ See AT&T Comments at 68; GTE Reply Comments at 68; Qwest Comments at 62.

¹⁹² See Qwest Comments at 62.

other forums or methods of guaranteeing fair and timely resolution of spectrum compatibility problems.

82. We seek comment on whether generic masks would be an appropriate means to address spectrum compatibility¹⁹³ We seek comment on whether this approach might restrict deployment of technologies that otherwise would not harm the network.

83. We seek comment on whether a calculation-based approach, in addition to a power spectral density mask-based approach, provides a better tool for defining spectral compatibility¹⁹⁴ We specifically seek comment whether such an approach provides a more accurate predictor of spectrum compatibility.

84. With regard to spectrum management, we believe that comments in response to this Further NPRM can provide the information necessary to establish long-term spectrum management rules. Our goal is that the rules developed as a result of the Further NPRM will encourage technical innovation while preserving network reliability. Although we believe that T1E1.4 could serve as the common ground where industry resolves these issues, we think the Commission can facilitate industry development of fair standards through this Further NPRM. We seek specific comment and clarification on the following items initially raised in the NPRM, but not sufficiently explicated in the record.

85. We seek comment on methods to encourage the industry to develop fair and open practices for the deployment of advanced services technologies. We tentatively conclude that T1E1.4 should serve as the forum to establish fair and open deployment practices. This conclusion is premised on the assumption that a method will be developed by which to ensure the active participation of all segments of the industry in T1E1.4.¹⁹⁵ What role should the Commission play in facilitating broad participation in this process?

86. We ask commenters to consider how to maximize the deployment of new technologies within binder groups while minimizing interference. We seek comment on the development of xDSL binder group administration practices, including specifications on the types and numbers of technologies that can be deployed within a binder group.¹⁹⁶ This should

¹⁹³ A generic mask defines a general purpose mask that could apply to several technologies. See Generic Approach and Common Specifications of Transmitter Power Spectral Density Masks for Twisted-Pair Loop Transmission Systems, Bellcore, March 4, 1998, T1E1.4 technical Subcommittee Working Group Members.

¹⁹⁴ See "A New Framework for Spectral Compatibility," submitted by PairGain to T1E1.4, at <http://www.tl.org/index/0312.htm>. A calculation-based approach uses a computational model for evaluating spectral compatibility, rather than a static PSD mask-based approach.

¹⁹⁵ See *supra* para. 80.

¹⁹⁶ See *supra* para. 70.

include procedures allowing for deployment of various xDSL-based services in a nonrestrictive manner.¹⁹⁷ We seek comment on the procedures for maintaining and updating these administrative practices so as to minimize interference with future technologies. We seek comment on the practice of segregating services based on the technology. For example, we recognize AMI T1 as a potential disturber and understand that incumbent LECs currently assign AMI T1 to separate binder groups. Competitive LECs have expressed concern that incumbent LECs might apply a similar segregation practice to xDSL technology -- a practice competitive LECs claim is not necessary or beneficial.¹⁹⁸ We seek comment on whether to allow incumbent LECs to segregate xDSL technology in such a manner.

87. We seek comment on whether we should establish a grandfathering process for interfering technologies.¹⁹⁹ For example, should the Commission establish a sunset period for services such as AMI T1? As noted above, we recognize that carriers have a substantial base of AMI T1 in deployment and that in some areas AMI T1 provides the only feasible high-speed transmission capability. We seek comment on whether carriers should be required to replace AMI T1 with new and less interfering technologies, and, if so, what time frame would be reasonable. We ask commenters to propose rules for a possible grandfathering process which will not disrupt the network and simultaneously encourage investment in, and deployment of, new technology.

88. We seek comment on whether to develop a dispute resolution process regarding the existence of disturbers in shared facilities. Specifically, we ask commenters to suggest how best to resolve disputes arising out of claims that a technology is "significantly degrading" the performance of other services.²⁰⁰ We also seek comment on whether, and if so, how we should define "significantly degrade" so as to ensure that consumers have the broadest selection of services from which to choose without harming the network. If we develop a dispute resolution process, should it rely on an outside party as an arbitrator, such

¹⁹⁷ See, e.g., DATA Comments at 10 ("Not surprisingly, these masks exactly match the ILECs' own proposed technology, but either limit or prohibit other technologies, even where other technologies have less potential to cause spectral interference.").

¹⁹⁸ Letter from James Earl, Assistant General Counsel, Covad, to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 98-147, at Attach. 2 (filed Nov. 6, 1998).

¹⁹⁹ Interfering technologies may include existing technologies, such as AMI T1, which have already been widely deployed in incumbent networks, or future technologies, the effects of which are not yet known. These technologies may cause significant interference with other services deployed in the network. Newer technologies may be able to provide the end user with the same amount of bandwidth while causing less interference with other services. See, e.g., NorthPoint Nov. 24, 1998 *Ex Parte* at 13-14. Transitioning customers to less interfering technologies, however, may disrupt service for subscribers. Thus, there are competing goals of maximizing noninterference between technologies and not interfering with subscribers' existing services.

²⁰⁰ See *supra* para. 66.

as the state commission, the FCC, or a neutral third party, or should the procedures simply provide the rules by which players must conform?

89. We seek comment to determine whether the Commission should solicit the assistance of a third party in developing loop spectrum management policies. What role could such a third party serve in facilitating communication between the industry and regulatory bodies? Should it serve a role similar to the role served by the administrator for local number portability?²⁰¹ Should it be empowered to develop binder group management procedures, facilitate the development of future PSD masks, and resolve disputes between carriers over the existence of disturbers in shared facilities? We also ask parties to comment on whether a voluntary industry effort could effectively address loop management issues.

90. We acknowledge that the industry, via the T1E1.4, is currently engaged in developing standards for various varieties of xDSL technologies.²⁰² We recognize further that the industry can best address many of the details concerning spectral compatibility. Furthermore, we acknowledge that many of the spectral compatibility issues will require ongoing analysis and oversight beyond the completion of this proceeding. Although we have initiated this Further NPRM in order to develop rules to address long-term spectrum management concerns, we expect that the industry, via the T1E1.4 or other bodies, will continue to develop standards and procedures to promote deployment of advanced services and resolve the problems that arise when multiple carriers deploy multiple technologies over the same facilities. We encourage the industry, through its standards bodies, to continue its independent efforts to develop long-term standards and practices for spectrum management. We expect that the industry will conduct this ongoing role in an expeditious, fair and open manner.

91. We ask commenters to address any additional measures the Commission could take to ensure that spectrum compatibility and management concerns are resolved in a fair and expeditious manner. We also ask commenters to consider what measures the Commission could take to ensure that spectral compatibility requirements are forward-looking and able to evolve over time to encourage, rather than stifle, innovation and deployment of advanced services.

B. Line Sharing

1. Overview

²⁰¹ See *In the Matter of Administration of the North American Numbering Plan*, Report and Order, 11 FCC Rcd 2588, at 2611-16, paras. 54-67 (1995).

²⁰² T1E1.4 is looking at a number of xDSL related issues. See <http://www.t1.org/index/0338.htm>.

92. In the *Advanced Services Order and NPRM*, we sought comment on whether two different service providers should be allowed to offer services over the same line, with each provider utilizing different frequencies to transport voice or data over that line.²⁰³ For example, ADSL-technology allows a high-speed data channel to run on higher frequencies above the frequency used for delivery of analog voice signals.²⁰⁴ By separating the line into a voice channel and an advanced services channel, such a line can carry both voice and advanced services traffic simultaneously and, potentially, each service could be provided by a different carrier.²⁰⁵ We asked commenters whether we should mandate such line sharing, specifically whether the competitive LEC should have the right to run high frequency data signals, or other advanced services, over the same line as the incumbent LEC's voice signal.²⁰⁶

93. Shared line access makes it possible for a competing carrier to offer advanced services over the same line that a consumer uses for voice service without requiring the competing carrier to take over responsibility for providing the voice service. Such shared line access would enable new entrants to focus solely on the advanced services market without having to acquire the resources or the expertise to provide other types of telecommunications services, such as analog voice service. Shared line access could also remove any cost disadvantage that an advanced services only provider might face if it had to provide advanced services over a stand-alone line. A competitive LEC, therefore, may want to take advantage of the ability of advanced services technology, such as ADSL, to run on the frequency above the analog voice channel by providing only high-speed data service, without voice service, over a loop.

94. We believe each end user customer should be able to choose from a broad array of services and from whom to obtain these services. Just as customers can choose one carrier to provide local service, another carrier to provide long distance, and a third entity to provide Internet access over a single line, a customer should have the right to purchase voice service from one carrier and advanced services from another over the same line. In particular, we believe allowing consumers to keep their voice service provider while allowing them to obtain advanced services on the same line from a different provider will foster consumer choice and promote innovation and competitive deployment of advanced services.

95. Line sharing assumes that a requesting carrier will have access to the incumbent LEC's local loop. While the Supreme Court, in *Iowa Utilities Board*, has directed

²⁰³ See *Advanced Services Order and NPRM* at para. 162; Sprint Comments at 23-26; NAS Comments at 30-33; NAS Reply Comments at 13-14.

²⁰⁴ MachOne Comments at 7, n.11.

²⁰⁵ *Id.*

²⁰⁶ *Advanced Services Order and NPRM* at para. 162.

the Commission to reevaluate the standard for defining the local loop as an unbundled network element,²⁰⁷ we see no reason to delay seeking comment in this proceeding on whether competing carriers may have access to the high frequency portion on an incumbent LEC's loop. To the extent that any redefinition of the local loop, or other network elements, affects any conclusions drawn from this proceeding, we will revise our analysis and conclusions accordingly.

2. Discussion

96. The existing record indicates that incumbent LECs have denied competitors the option of offering advanced services over the same line on which the incumbent LEC provides voice service.²⁰⁸ Therefore, in order to provide advanced services to their customers, competing carriers have had to obtain additional lines, typically dedicated to high speed, digital transmission. We believe that if shared line access could be made widely available, competition for advanced services would grow more rapidly as consumers would not be required to purchase a second telephone line in order to have access to high-speed digital services, and competitors would offer advanced services to markets, such as the residential market, where loop costs make a stand-alone data service uneconomic. Line sharing also holds the possibility of enabling more providers to enter the advanced services market and to enter the market in a manner that enables them to incur no greater costs than the incumbent LEC or its affiliate will incur.²⁰⁹ As a result, line sharing should promote consumer choice. For example, consumers might want to stay with their existing local telephone company for their plain old telephone service and might want to choose a different carrier for advanced services without incurring the additional expense of installing a new line. Line sharing will enable such customers to keep their analog voice service with their local telephone company, while a competitive LEC provides high-speed digital services over the same line.

97. We decline, however, to mandate line sharing at the federal level at this time under the accompanying Report and Order. Although we find no evidence that line sharing is not technically feasible, we find that the record does not sufficiently address the operational, pricing, and other practical issues that may arise if LECs are compelled to share lines with competitors.²¹⁰ We acknowledge that the Commission has concluded that a "determination of

²⁰⁷ See *Iowa Utilities Board*, 119 S.Ct. at 733-36.

²⁰⁸ See, e.g., MachOne Comments at 5.

²⁰⁹ See *id.*

²¹⁰ See, e.g., Letter from Peter K. Pitsch, Intel, to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 98-147, at 1 (filed Jan. 21, 1999) (Intel Jan. 21, 1999 *Ex Parte*) ("... line sharing is technically feasible. . . . However, [there may be] significant operational concerns. . . .").

technical feasibility does not include consideration of economic, accounting, billing, space, or site, concerns."²¹¹ Several incumbent LECs have raised, however, billing, accounting, and other operational issues, that we would like to consider before we determine whether to mandate line sharing nationwide. For example, how will two carriers coordinate and manage assignment, maintenance, repair, and billing systems?²¹² While none of the issues raised by the incumbents challenge the technical feasibility of line sharing, we believe that there may be practical considerations that have not been adequately addressed in the existing record. Moreover, there may be policy considerations that weigh against line sharing, even if the Commission were to conclude that technical and operational concerns could be met. For example, would line sharing create disincentives for investment in facilities or in using the full capability of the local loop? As a result, we seek additional comments in the Further NPRM in order to develop a more comprehensive record on the policy and practical ramifications of federally mandated line sharing, including any policy considerations that weigh against line sharing.

a. Authority to Require Line Sharing

98. In *Iowa Utilities Board*, the Supreme Court held that we have jurisdiction to implement the local competition provisions of the Act and that our rulemaking authority extends to sections 251 and 252.²¹³ We therefore tentatively conclude that we have authority to require line sharing. We seek comment on this tentative conclusion. Finally, we tentatively conclude that nothing in the Act, our rules, or caselaw precludes states from mandating line sharing, regardless of whether the incumbent LEC offers line sharing to itself or others, and regardless of whether it offers advanced services.²¹⁴ We seek comment on these tentative conclusions.

b. Access to "High-Frequency Portion" of the Loop

99. We tentatively conclude that incumbent LECs must provide requesting carriers with access to the transmission frequencies above that used for analog voice service on any lines that LECs use to provide exchange service when the LEC itself provides both exchange

²¹¹ 47 C.F.R. § 51.5.

²¹² See, e.g., Letter from Dee May, Bell Atlantic, to Michael Pryor, Deputy Division Chief, Common Carrier Bureau, Federal Communications Commission, CC Docket No. 98-147, at 12-14 (filed Dec. 14, 1998) (Bell Atlantic Dec. 14, 1998 *Ex Parte*) ("having two carriers provide service over different portions of the loop will require extensive coordination between them that will necessarily increase the cost of such things as billing and maintaining the loop").

²¹³ *Iowa Utilities Board*, 119 S.Ct. at 726-29.

²¹⁴ See MachOne Reply Comments at 9-10; but see *In the Matter of the Petition of PDO Communications, Inc. for Arbitration Pursuant to Section 252 of the Federal Communications Act of 1996 to Establish an Interconnection Agreement with Pacific Bell*, Application No. 98-06-052, Opinion (Cal.P.U.C. Jan. 7, 1999).

and advanced services over a single line. We tentatively conclude that, without such a ruling, competitive LECs will be hampered in their ability to compete in providing advanced services to end users because the competitive LEC would have to obtain a new line from the incumbent LEC in order to provide advanced services whereas the incumbent LEC could provide advanced services far less expensively by using the existing line. We seek comment on these tentative conclusions. Moreover, in the absence of line sharing, the competing carrier effectively may be forced to provide both voice and data over the local loop it leases from the incumbent. This means that the competing carrier potentially must invest in two technologies -- circuit switched technology for voice transmissions and packet switched technologies for data. The competing carrier may need to make this investment in circuit technology even though that technology may become obsolete over time. We seek comment on the extent to which the absence of line sharing requires such dual investment and the competitive effect of such dual investment.

100. We also seek comment in this proceeding on whether we should more precisely define what constitutes the frequency above that used for analog voice service, so that it is clear to all parties what the incumbent must unbundle, in the event we require line sharing. We ask commenters to address whether setting a specific dividing line between a low frequency channel and a high frequency channel on the loop would arbitrarily freeze technological development and deny carriers opportunities to use the loop to provision services that rely on different frequencies bands within the loop.²¹⁵

101. We also tentatively conclude that any rules we adopt on line sharing should not mandate a particular technological approach to the use of a line for multiple services. We believe that shared line access is a rapidly evolving technology and any rules we adopt must be forward-looking and flexible enough to stimulate, rather than stifle, technological innovation.²¹⁶ We ask commenters to address how we can construct regulations that promote local competition and technological innovation so that American consumers can take full advantage of the line's features, functionalities, and capabilities.

**c. Technical, Operational, Economic, Pricing, and Cost
Allocation Issues Associated with Line Sharing**

102. The current record in this proceeding reveals that incumbent LECs have opposed line-sharing with xDSL-based providers on the grounds that simultaneous provision of advanced service and voice service over a single line by separate providers is not technically feasible.²¹⁷ These parties broadly argue that allowing new entrants to acquire

²¹⁵ See, e.g., Bell Atlantic Dec. 14, 1998 *Ex Parte* at 2.

²¹⁶ See MCI WorldCom Comments at 86; DATA Reply Comments at 13.

²¹⁷ See, e.g., Ameritech Comments at 21-22; BellSouth Comments at 51-53; GTE Comments at 86-90; SBC Comments at 36-42.

rights to the high frequency channel of the line, while declining to purchase the voice channel of the line, would harm the network.²¹⁸ We find that incumbent LECs have placed nothing on the record in this proceeding demonstrating that a competitor's advanced services equipment is likely to cause any network problems.

103. Technical Issues. We find nothing in the existing record to persuade us that line sharing is not technically feasible.²¹⁹ In fact, incumbent LECs are already sharing the line for the provision of both voice and advanced services. Pacific Bell, for instance, offers line sharing to an independent Internet Service Provider, Concentric Network, Inc, which describes its xDSL-based service as follows:

Installation prices include the following: DSL modem, and if using PacBell and an existing phone line, a splitter If PacBell is the LEC, the standard phone service charge for the phone line used as the DSL circuit is not included. However, an existing phone line may be used, and a splitter will be installed to enable your existing phone line to carry both your data and voice traffic. Our other DSL LECs require a new phone line be installed and the phone service fee is included.²²⁰

Technically, there appears to be no analytic difference between Pacific Bell's offering to Concentric of xDSL-based services for Internet connectivity over a shared line and Pacific Bell allowing an xDSL provider to order the data functionality of a loop. In both cases, consumers will receive two separate services from two separate providers (at least in terms of operational responsibility) over one copper loop. In the Concentric case, the incumbent LEC owns and maintains the network portion of the xDSL equipment at the customer premises and in the central office (or wherever the xDSL line terminates), and splits the data signals off at the line termination for Concentric. In the case of a competitive xDSL provider, the equipment employed would be virtually identical, but would be owned and maintained by the advanced services provider. Once again, the advanced services and voice signals would run together along the copper loop until they reached the termination of the xDSL-capable loop (in the central office or remote terminal) where the voice signal would be directed to the incumbent LEC's switch, and the advanced services signal would be transported to the advanced services provider's point of presence. Furthermore, the incumbent LEC retail xDSL tariffs filed with the Commission specifically offer ADSL service as an overlay to existing voice service, so that both services are provided over the same line.²²¹ In these

²¹⁸ See *id.*

²¹⁹ See, e.g., Intel Jan. 21, 1999 *Ex Parte* at 1.

²²⁰ MachOne Reply Comments at 7, n.13.

²²¹ Bell Atlantic Direct Case, *Bell Atlantic Telephone Companies Tariff FCC No. 1, Transmittal No. 1076*, CC Docket No. 98-168 (filed Oct. 6, 1998) at 13; BellSouth Reply Comments, *BellSouth Telecommunications, Inc. FCC No. 1* (filed Aug. 31, 1998) at 10-11; GTE Reply Comments, *GTE Telephone Operating Companies*

offerings, the incumbent LEC uses splitter functionality to bundle the voice and data at the customer's premises and unbundle them at the central office end of the loop.²²² Thus the incumbent LEC xDSL tariffs add further support to the proposition that line sharing is technically feasible. As further evidence of the technical feasibility of line sharing, at least one competitive LEC reports that it has successfully conducted technical trials for line sharing of its xDSL-based data services with the voice services of an independent incumbent LEC.²²³ Because incumbent LECs are already using single lines to provide both voice and advanced services and are even sharing lines with other providers for the provision of both voice and advanced services, it appears that there exists no *bona fide* issue of technical infeasibility. As such, we tentatively conclude that line sharing is technically feasible. We seek comment on this tentative conclusion.

104. Although not set forth in the record, we can conceive of some circumstances in which advanced services cannot share a line with analog voice service. For example, some varieties of xDSL may interfere with the analog voice signal. Furthermore, if load coils or repeaters are needed to amplify the voice signal over a long loop, removal of those repeaters to allow for the transmission of high frequency signals would hamper the quality of the voice service. We tentatively conclude that such isolated situations can be remedied and should not interfere with the incumbent's general obligation to share the line. We tentatively conclude that, to the extent that an incumbent LEC can demonstrate to the state commission that digital loop conditioning would interfere with the analog voice service of the line, line sharing is not technically feasible on that particular line, and the incumbent is not obligated to share that line. We tentatively conclude that incumbent LECs would be required to perform other sorts of conditioning, such as removing bridge taps or cleaning up splices along the loop, that would not interfere with the analog voice signal. We seek comment on these tentative conclusions. We ask commenters to address any other technical problems that may arise in line sharing arrangements and to suggest remedies for such problems.

105. Operational Issues. In addition to technical feasibility concerns, commenters raise concerns about operational barriers to line sharing.²²⁴ U S WEST, for example, concedes that the issue is not the technical feasibility of actually sharing the line between voice and advanced services, but instead the operational ability to manage shared lines in

Tariff FCC No. 1 (filed May 28, 1998) at 17-19; Pacific Bell Reply Comments, *Pacific Bell Tariff FCC No. 128* (filed June 26, 1998) at 15.

²²² *Bell Atlantic Telephone Companies Tariff FCC No. 1, Transmittal No. 1076* at para. 918.39.

²²³ MachOne Reply Comments at Exhibit B.

²²⁴ See, e.g., Bell Atlantic Dec. 14, 1998 *Ex Parte* at 1 (spectrum unbundling "is unsound on both legal and policy grounds"); SBC Comments at 36-42; U S WEST Comments at 47 & Attach, D para. 12.

terms of "assignment, maintenance, billing and repair systems."²²⁵ We ask commenters to discuss the operational issues that may arise with line sharing. For example, what effect will line sharing have on existing analog voice service? Should carriers be allowed to request just the voice channel of a line? Should carriers be allowed to request any unused portion of a line? How will line sharing affect existing and evolving operations support systems? To what extent will LEC operations support systems need to be modified in order to allow two carriers to share a line? Which entity should manage the multiplexing equipment if two carriers are offering services over the same loop? Should different customers be allowed on the same physical loop? How and by whom should problems on the line be handled? What happens if conditioning a loop for advanced services requires removal of repeaters or load coils, which are needed to preserve the quality of the analog voice signal? These examples are merely illustrative of issues that may arise from two carriers providing services over the same line. We ask commenters to address these issues and any other operational, administrative, and pricing concerns with specificity.

106. Economic, Pricing, and Cost Allocation Issues. We also seek comment on the economic, pricing, and cost allocation issues that may arise from line sharing. For example, how might line sharing affect federal and state access charge regimes and universal service mechanisms? What are the pricing consequences of requiring line sharing (*e.g.*, what consequences will line sharing have on the price of the unbundled local loop)? Should the entire cost of the loop be imputed to the voice channel or divided equally or otherwise between the two services sharing the facility? What cost allocation issues, if any, are raised by line sharing? What effect will line sharing have on new entrants' ability to compete with incumbents?²²⁶ How will line sharing stimulate or retard innovation? How will line sharing affect investment in local exchange facilities?

107. Finally, we ask commenters to address the continued viability of line sharing arrangements as telecommunications network architectures migrate from a circuit to a packet environment. As carriers deploy ATM and other packet technologies, and as voice traffic moves from the circuit-switched network to Internet Protocol (IP) or ATM networks, is a line sharing requirement commercially or technically feasible? Commenters should address

²²⁵ U S WEST Comments at 47 & Attach, D para. 12.

²²⁶ For example, without line sharing, xDSL-based service providers generally must provide xDSL-based services over a "stand alone" line, in which case they must recover the entire cost of that line from the xDSL-based service alone. Because the recurring loop cost in most cases is approximately half the total cost of providing xDSL-based services, a second line means that competitive xDSL-based service providers must recover significant costs that the incumbent LECs do not have to carry. The incumbent LECs, providing both voice and data over a single line, therefore calculate the loops cost for their xDSL-based service at \$0 a month, while the competitive LEC competitors may pay as much as \$40. *See, e.g.*, DATA Dec. 1, 1998 *Ex Parte* at 2-3. This makes it impossible for a data competitive LEC employing two lines to compete with incumbent LECs on price, particularly for the residential consumer market. This scenario, commonly referred to as a "price squeeze," may result in the competitive LEC's cost for the xDSL-capable loop being greater than the incumbent LEC's charge for xDSL-based services.

whether a competitive LEC's ability to deliver voice service over a packet-switched network obviates the need to share a loop with the incumbent LEC.

C. Procedural Matters

1. Ex Parte Presentations

108. The matter in Docket No. 98-147, initiated by the Further NPRM portion of this item, shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's *ex parte* rules.²²⁷ Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentations must contain summaries of the substance of the presentations and not merely a listing of the subjects discussed. More than a one or two sentence description of the views and arguments presented is generally required.²²⁸ Other rules pertaining to oral and written presentations are set forth in Section 1.1206(b) as well.

2. Initial Paperwork Reduction Act Analysis

109. The Further NPRM contains either a proposed or modified information collection. As part of its continuing effort to reduce paperwork burdens, we invite the general public and the Office of Management and Budget (OMB) to take this opportunity to comment on the information collections contained in this Notice, as required by the Paperwork Reduction Act of 1995, Public Law No. 104-13. Public and agency comments are due at the same time as other comments on this Notice; OMB comments are due 60 days from date of publication of this Notice in the Federal Register. Comments should address: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology.

3. Initial Regulatory Flexibility Analysis

110. As required by the Regulatory Flexibility Act, *see* 5 U.S.C. § 603, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible impact on small entities of the proposals suggested in this document. The IRFA is set forth as Appendix D. Written public comments are requested with respect to the IRFA. These comments must be filed in accordance with the same filing deadlines for comments on the

²²⁷ See Amendment of 47 C.F.R. § 1.1200 *et seq.* Concerning *Ex Parte* Presentations in Commission Proceedings, GC Docket No. 95-21, Report and Order, 12 FCC Rcd 7348, 7356-57, para. 27 citing 47 C.F.R. § 1.1204(b)(1) (1997).

²²⁸ See 47 C.F.R. § 1.1206(b)(2), as revised.

rest of the NPRM, but they must have a separate and distinct heading, designating the comments as responses to the IRFA. The Office of Public Affairs, Reference Operations Division, will send a copy of this NPRM, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration, in accordance with the Regulatory Flexibility Act.

4. Comment Filing Procedures

111. The proceeding, Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147, is initiated by the Further NPRM portion of this item. Pursuant to Sections 1.415 and 1.419 of the Commission's rules, 47 C.F.R. §§ 1.415, 1.419, interested parties may file comments on or before June 15, 1999 and reply comments on or before July 15, 1999. All filings should refer only to Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS) or by filing paper copies. *See Electronic Filing of Documents in Rulemaking Proceedings*, 63 Fed. Reg. 24,121 (1998). Comments filed through the ECFS can be sent as an electronic file via the Internet to <<http://www.fcc.gov/e-file/ecfs.html>>. Generally, only one copy of an electronic submission must be filed. In completing the transmittal screen, commenters should include their full name, Postal Service mailing address, and the applicable docket or rulemaking number, which in this instance is CC Docket No. 98-147. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions for e-mail comments, commenters should send an e-mail to ecfs@fcc.gov, and should include the following words in the body of the message, "get form <your e-mail address.>" A sample form and directions will be sent in reply.

112. Parties who choose to file by paper must file an original and four copies of each filing. All filings must be sent to the Commission's Secretary, Magalie Roman Salas, Office of the Secretary, Federal Communications Commission, 445 12th St. N.W., Room TW-B204, Washington, D.C. 20554.

113. Parties who choose to file by paper should also submit their comments on diskette. These diskettes should be submitted to Janice Myles, Common Carrier Bureau, Policy and Program Planning Division, 445 12th Street, S.W., Washington, DC 20554. Such a submission should be on a 3.5 inch diskette formatted in an IBM compatible format using WordPerfect 5.1 for Windows or compatible software. The diskette should be accompanied by a cover letter and should be submitted in "read only" mode. The diskette should be clearly labelled with the commenter's name, proceeding (including the docket number, in this case, CC Docket No. 98-147), type of pleading (comment or reply comment), date of submission, and the name of the electronic file on the diskette. The label should also include the following phrase "Disk Copy - Not an Original." Each diskette should contain only one party's pleadings, preferably in a single electronic file. In addition, commenters must send diskette copies to the Commission's copy contractor, International Transcription Service, Inc., 1231 20th Street, N.W., Washington, D.C. 20037.

114. Regardless of whether parties choose to file electronically or by paper, parties should also file one copy of any documents filed in this docket with the Commission's copy contractor, International Transcription Services, Inc., 1231 20th Street, N.W., Washington, D.C., 20036. Comments and reply comments will be available for public inspection during regular business hours in the FCC Reference Center, 445 12th Street, S.W., Washington, DC 20554.

115. Comments and reply comments must include a short and concise summary of the substantive arguments raised in the pleading. Comments and reply comments must also comply with section 1.49 and all other applicable sections of the Commission's rules.²²⁹ We also direct all interested parties to include the name of the filing party and the date of the filing on each page of their comments and reply comments. All parties are encouraged to utilize a table of contents, regardless of the length of their submission. We also strongly encourage that parties track the organization set forth in this NPRM in order to facilitate our internal review process.

116. Written comments by the public on the proposed and/or modified information collections are due on or before June 15, 1999 and reply comments on or before July 15, 1999. Written comments must be submitted by the OMB on the proposed and/or modified information collections on or before 60 days after date of publication in the Federal Register. In addition to filing comments with the Secretary, a copy of any comments on the information collections contained herein should be submitted to Judy Boley, Federal Communications Commission, 1-C804, 445 12th Street, SW, Washington, DC 20554 or via the Internet to jboley@fcc.gov and to Timothy Fain, OMB Desk Officer, 10236 NEOB, 725 - 17th Street, N.W., Washington, DC 20503 or via the Internet to fain_t@al.eop.gov.

5. Further Information

117. For further information regarding this proceeding, contact Michael Pryor, Deputy Division Chief, Policy and Program Planning Division, Common Carrier Bureau, at 202-418-1580 or mpryor@fcc.gov. Further information may also be obtained by calling the Common Carrier Bureau's TTY number: 202-418-0484.

VI. Ordering Clauses

118. Accordingly, IT IS ORDERED that, pursuant to sections 1-4, 10, 201, 202, 251-254, 256, 271, and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151-154, 160, 201, 202, 251-254, 256, 271, and 303(r), the FIRST REPORT AND ORDER is hereby ADOPTED. The requirements adopted in this Order shall be effective 30 days after publication of a summary thereof in the Federal Register.

²²⁹ See 47 C.F.R. § 1.49.

119. IT IS FURTHER ORDERED that, pursuant to sections 1-4, 10, 201, 202, 251-254, 256, 271, and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151-154, 160, 201, 202, 251-254, 256, 271, and 303(r), the FURTHER NOTICE OF PROPOSED RULEMAKING is hereby ADOPTED.

120. IT IS FURTHER ORDERED that the Commission's Office of Public Affairs, Reference Operations Division, SHALL SEND a copy of this FIRST REPORT AND ORDER, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

121. IT IS FURTHER ORDERED that the Commission's Office of Public Affairs, Reference Operations Division, SHALL SEND a copy of the FURTHER NOTICE OF PROPOSED RULEMAKING, including the Initial Regulatory Flexibility Certification, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Magalie Roman Salas
Secretary

APPENDIX A

**Advanced Telecommunications Services
CC Docket No. 98-147
Comments
September 25, 1998**

1. ADC Telecommunications, Inc.
2. Ad Hoc Telecommunications Users Committee
3. Alliance for Public Technology
4. Allegiance Telecom, Inc.
5. America Online, Inc.
6. America's Carriers Telecommunications Association (ACTA)
7. Ameritech
8. Association for Local Telecommunications Services (ALTS)
9. AT&T Corp.
10. Bell Atlantic
11. BellSouth Corporation
12. Cable & Wireless, Inc.
13. Cablevision Lightpath, Inc.
14. Central Texas Telephone Cooperative, Inc.
15. Cincinnati Bell Telephone Company
16. Coalition of Utah Independent Internet Service Providers
17. Commercial Internet Exchange Association
18. Communications Workers of America
19. Competition Policy Institute
20. Competitive Telecommunications Association (CompTel)
21. Computer & Communications Industry Association
22. Consumer Federation of America
23. Copper Mountain Networks, Inc.
24. Cottonwood Communications
25. Covad Communications Company
26. CTSI, Inc.
27. e.spire Communications, Inc.
28. Federal Trade Commission
29. First Regional TeleCOM, LLC and FirstWorld Communications, Inc.
30. Florida Digital Network, Inc.
31. Florida Public Service Commission
32. General Services Administration
33. GST Telecom Inc.
34. GTE Service Corporation
35. GVNW Inc.
36. Hyperion Telecommunications, Inc.
37. ICG Telecom Group, Inc.

38. Illinois Commerce Commission
39. Indiana Utility Regulatory Commission and Staff of Public Service Commission of Wisconsin
40. Information Technology Association of America
41. Intermedia Communications Inc.
42. Internet Access Coalition
43. Internet Service Providers' Consortium
44. Keep America Connected, United Homeowners Association, Alpha One, American Council on Education, National Braille Press, National Association of Commissions for Women, the National Trust for the Development of African American Men, National Association for College and University Business Officers, Latin American Women and Supporters, Harlem Consumer Education Council, National Latino Telecommunications Task Force, Northern Virginia Resource Center for the Deaf and Hard of Hearing, MaineCITE Coordinating Committee, Florida Association for the Deaf, American Telemedicine Association, World Institute on Disability, The Massachusetts Assistive Technology Partnership, and National Association of Development Organizations
45. Kiesling Consulting LLC
46. KMC Telecom, Inc.
47. Level 3 Communications, Inc.
48. MachOne Communications, Inc.
49. McLeodUSA Telecommunications Services, Inc.
50. MCI WorldCom, Inc.
51. MGC Communications, Inc.
52. Mindspring Enterprises, Inc.
53. Minnesota Department of Public Service
54. Moultrie Independent Telephone Company
55. National Rural Telecom Association and the Organization for the Promotion and Advancement of Small Telephone Companies (NRTA/OPASTCO)
56. National Telephone Cooperative Association
57. Network Access Solutions, Inc.
58. Network Plus, Inc.
59. New Networks Institute (Bruce Kushnick)
60. New World Paradigm, Ltd.
61. New York Department of Public Service
62. NEXTLINK Communications, Inc.
63. Northern Telecom, Inc.
64. Northpoint Communications Inc.
65. OpTel, Inc.
66. Paradyne Corporation
67. Paging and Messaging Alliance of the Personal Communications Industry Association
68. Paging Network, Inc. (PageNet)
69. People of the State of California and PUC of California
70. PSINet, Inc.

71. Public Utility Commission of Texas
72. Qwest Communications Corporation
73. RCN Telecom Services, Inc.
74. Rhythms NetConnections, Inc.
75. Rural Telecommunications Group
76. SBC Communications Inc.
77. Sprint Corporation
78. Supra Telecommunications and Information Systems, Inc.
79. Tandy Corporation
80. Technology Entrepreneurs Coalition
81. TCA, Inc.
82. Telecommunications Resellers Association
83. Telehub Network Services Corporation
84. Time Warner Telecom
85. Transwire Communications, Inc.
86. United States Small Business Association
87. United States Telephone Association
88. UTC
89. U S WEST Communications, Inc.
90. US Xchange, LLC
91. Virtual Hipster (Shad Nygren)
92. Warner, Jim
93. Washington Association of Internet Service Providers
94. Westel, Inc.
95. Williams Communications, Inc.
96. xDSL Networks, Inc.

Reply Comments -- October 16, 1998

1. Allegiance Telecom, Inc.
2. ALLTEL Communications Services Corporation
3. Ameritech
4. Association for Local Telecommunications Services (ALTS)
5. AT&T Corp.
6. Aware, Inc.
7. Bell Atlantic
8. BellSouth Corporation
9. Coalition of Utah Independent Internet Service Providers
10. Commercial Internet Exchange Association
11. Consumer Federation of America
12. Covad Communications Company
13. CTSI, Inc.
14. DSL Access Telecommunications Alliance
15. e.spire Communications, Inc.

16. Excel Telecommunications, Inc.
17. Florida Digital Network, Inc.
18. General Services Administration
19. GST Telecom Inc.
20. GTE Service Corporation
21. Hyperion Telecommunications, Inc.
22. Intermedia Communications Inc.
23. Keep America Connected, United Homeowners Association, Harlem Consumer Education Council, National Latino Telecommunications Task Force, American Telemedicine Association, National Association of Development Organizations, Alpha One, and The World Institute on Disability
24. KMC Telecom, Inc.
25. Level 3 Communications, Inc.
26. MachOne Communications, Inc.
27. MCI WorldCom, Inc.
28. MGC Communications, Inc.
29. Mindspring Enterprises, Inc.
30. Moultrie Independent Telephone Company
31. National Cable Television Association
32. National Rural Telecom Association and the Organization for the Promotion and Advancement of Small Telecommunications Companies
33. National Telephone Cooperative Association
34. Network Access Solutions, Inc.
35. Network Plus, Inc.
36. New World Paradigm, Ltd.
37. Next Level Communications
38. NEXTLINK Communications, Inc.
39. Northpoint Communications Inc.
40. Qwest Communications Corporation
41. RCN Telecom Services, Inc.
42. Rural Telecommunications Group
43. SBC Communications Inc.
44. Sprint Corporation
45. Telecommunications Resellers Association
46. Telehub Network Services Corporation
47. Teligent, Inc. and Net2000 Group, Inc.
48. Time Warner Telecom
49. Transwire Communications, Inc.
50. United States Small Business Association
51. United States Telephone Association
52. Universal Service Alliance
53. U S WEST Communications, Inc.
54. Verio Inc.
55. Virgin Islands Telephone Corporation

APPENDIX B - Final Rules**AMENDMENTS TO THE CODE OF FEDERAL REGULATIONS**

1. Part 51 of Title 47 of the Code of Federal Regulations (C.F.R.) is amended as follows:

PART 51 - INTERCONNECTION

* * * *

Subpart A - General Information

* * * *

2. Section 51.5 is amended by adding the following language:

§ 51.5 Terms and Definitions.

* * * *

Advanced Services. The term "advanced services" is defined as high speed, switched, broadband, wireline telecommunications capability that enables users to originate and receive high-quality voice, data, graphics or video telecommunications using any technology.

* * * *

Subpart D - Additional Obligations of Incumbent Local Exchange Carriers

3. Section 51.321 is amended by revising paragraphs (c) and (f) and adding new paragraphs (h) and (i) to read as follows:

§ 51.321 Methods of obtaining interconnection and access to unbundled elements under section 251 of the Act.

* * * *

(c) A previously successful method of obtaining interconnection or access to unbundled network elements at a particular premises or point on any incumbent LEC's network is substantial evidence that such method is technically feasible in the case of substantially similar network premises or points. A requesting telecommunications carrier seeking a particular collocation arrangement, either physical or virtual, is entitled to a presumption that such arrangement is technically feasible if any LEC has deployed such collocation arrangement in any incumbent LEC premises.

* * * *

(f) An incumbent LEC shall submit to the state commission, subject to any protective order as the state commission may deem necessary, detailed floor plans or diagrams of any premises where the incumbent LEC claims that physical collocation is not practical because of space limitations. An incumbent LEC that contends space for physical collocation is not available in an incumbent LEC premises must also allow the requesting carrier to tour the entire premises in question, not just the area in which space was denied, without charge, within ten days of the receipt of the incumbent LEC's denial of space.

* * * *

(h) Upon request, an incumbent LEC must submit to the requesting carrier within ten days of the submission of the request a report indicating the incumbent LEC's available collocation space in a particular LEC premises. This report must specify the amount of collocation space available at each requested premises, the number of collocators, and any modifications in the use of the space since the last report. This report must also include measures that the incumbent LEC is taking to make additional space available for collocation. The incumbent LEC must maintain a publicly available document, posted for viewing on the incumbent LEC's publically available Internet site, indicating all premises that are full, and must update such a document within ten days of the date at which a premises runs out of physical collocation space.

(i) An incumbent LEC must, upon request, remove obsolete unused equipment from their premises to increase the amount of space available for collocation.

4. Section 51.323 is amended by revising paragraphs (b), (c), (h), and (i) and adding new paragraph (k) to read as follows:

§ 51.323 Standards for physical collocation and virtual collocation.

* * * *

(b) An incumbent LEC shall permit the collocation of any type of equipment used or useful for interconnection or access to unbundled network elements. Whenever an incumbent LEC objects to collocation of equipment by a requesting telecommunications carrier for the purposes within the scope of section 251(c)(6) of the Act, the incumbent LEC shall prove to the state commission that the equipment will not be actually used by the telecommunications carrier for the purpose of obtaining interconnection or access to unbundled network elements. An incumbent LEC may not object to the collocation of equipment on the grounds that the equipment does not comply with safety or engineering standards that are more stringent than the safety or engineering standards that the incumbent LEC applies to its own equipment. An incumbent LEC may not object to the collocation of equipment on the ground that the equipment fails to comply with National Equipment and Building Specifications performance

standards. An incumbent LEC that denies collocation of a competitor's equipment, citing safety standards, must provide to the competitive LEC within five business days of the denial a list of all equipment that the incumbent LEC locates within the premises in question, together with an affidavit attesting that all of that equipment meets or exceeds the safety standard that the incumbent LEC contends the competitor's equipment fails to meet. Equipment used for interconnection and access to unbundled network elements includes, but is not limited to:

(1) Transmission equipment including, but not limited to, optical terminating equipment and multiplexers, and

(2) Equipment being collocated to terminate basic transmission facilities pursuant to §§ 66.1401 and 64.1402 of this chapter as of August 1, 1996.

(3) Digital subscriber line access multiplexers, routers, asynchronous transfer mode multiplexers, and remote switching modules.

* * * *

(c) Nothing in this section requires an incumbent LEC to permit collocation of equipment used solely for switching or solely to provide enhanced services; provided, however, that an incumbent LEC may not place any limitations on the ability of requesting carriers to use all the features, functions, and capabilities of equipment collocated pursuant to subsection (b), including, but not limited to, switching and routing features and functions and enhanced services functionalities.

* * * *

(h) An incumbent LEC shall permit a collocating telecommunications carrier to interconnect its network with that of another collocating telecommunications carrier at the incumbent LEC's premises and to connect its collocated equipment to the collocated equipment of another telecommunications carrier within the same premises provided that the collocated equipment is also used for interconnection with the incumbent LEC or for access to the incumbent LEC's unbundled network elements.

(1) An incumbent LEC shall provide, at the request of a collocating telecommunications carrier, the connection between the equipment in the collocated spaces of two or more telecommunications carriers. The incumbent LEC must permit any collocating telecommunications carrier to construct its own connection between the carrier's equipment and that of one or more collocating carriers, if the telecommunications carrier does not request the incumbent LEC's construction of such facilities. The incumbent LEC must permit the requesting carrier to construct such facilities using copper or optical fiber equipment.

(2) An incumbent LEC shall permit collocating telecommunications carriers to place their own connecting transmission facilities within the incumbent LEC's premises outside of the actual physical collocation space, subject only to reasonable safety limitations.

(i) As provided herein, an incumbent LEC may require reasonable security arrangements to protect its equipment and ensure network reliability. An incumbent LEC may only impose security arrangements that are as stringent as the security arrangements that incumbent LECs maintain at their own premises for their own employees or authorized contractors. An incumbent LEC must allow collocating parties to access their collocated equipment 24 hours a day, seven days a week, without requiring either a security escort of any kind or delaying a competitor's employees' entry into the incumbent LEC's premises. Reasonable security measures that the incumbent LEC may adopt include:

(1) installing security cameras or other monitoring systems; or

(2) requiring competitive LEC personnel to use badges with computerized tracking systems; or

(3) requiring competitive LEC employees to undergo the same level of security training, or its equivalent, that the incumbent's own employees, or third party contractors providing similar functions, must undergo; provided, however, that the incumbent LEC may not require competitive LEC employees to receive such training from the incumbent LEC itself, but must provide information to the competitive LEC on the specific type of training required so the competitive LEC's employees can conduct their own training.

* * * *

(k) An incumbent LEC's physical collocation offering must include the following:

(1) Shared collocation cages. A shared collocation cage is a caged collocation space shared by two or more competitive LECs pursuant to terms and conditions agreed to by the competitive LECs. In making shared cage arrangements available, an incumbent LEC may not increase the cost of site preparation or nonrecurring charges above the cost for provisioning such a cage of similar dimensions and material to a single collocating party. In addition, the incumbent must prorate the charge for site conditioning and preparation undertaken by the incumbent to construct the shared collocation cage or condition the space for collocation use, regardless of how many carriers actually collocate in that cage, by determining the total charge for site preparation and allocating that charge to a collocating carrier based on the percentage of the total space utilized by that carrier. An incumbent LEC must make shared collocation space available in single-bay increments or their equivalent, *i.e.*, a competing carrier can purchase space in increments small enough to collocate a single rack, or bay, of equipment.

(2) Cageless collocation. Incumbent LECs must allow competitors to collocate in any unused space in the incumbent LEC's premises, without requiring the construction of a cage or similar structure, and without requiring the creation of a separate entrance to the competitor's collocation space. An incumbent LEC may require collocating carriers to use a central entrance to the incumbent's building, but may not require construction of a new entrance for competitors' use, and once inside the building, incumbent LECs must permit collocating carriers to have direct access to their equipment. An incumbent LEC may not require competitors to use an intermediate interconnection arrangement in lieu of direct connection to the incumbent's network if technically feasible. In addition, an incumbent LEC must give competitors the option of collocating equipment in any unused space within the incumbent's premises, and may not require competitors to collocate in a room or isolated space separate from the incumbent's own equipment. An incumbent LEC must make cageless collocation space available in single-bay increments, meaning that a competing carrier can purchase space in increments small enough to collocate a single rack, or bay, of equipment.

(3) Adjacent space collocation. An incumbent LEC must make available, where space is legitimately exhausted in a particular incumbent LEC premises, collocation in adjacent controlled environmental vaults or similar structures to the extent technically feasible. The incumbent LEC must permit the new entrant to construct or otherwise procure such an adjacent structure, subject only to reasonable safety and maintenance requirements. The incumbent must provide power and physical collocation services and facilities, subject to the same nondiscrimination requirements as applicable to any other physical collocation arrangement. The incumbent LEC must permit the requesting carrier to place its own equipment, including, but not limited to, copper cables, coaxial cables, fiber cables, and telecommunications equipment, in adjacent facilities constructed by either the incumbent LEC or by the requesting carrier itself.

APPENDIX C -- REGULATORY FLEXIBILITY ANALYSIS**FINAL REGULATORY FLEXIBILITY ANALYSIS**

1. As required by the Regulatory Flexibility Act (RFA),²³⁰ an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Advanced Services Order and NPRM*. The Commission sought written public comment on the proposals in the *Advanced Services Order and NPRM*, including comment on the IRFA. [The comments received are discussed below.] This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.²³¹

I. Need for and Objectives of this First Report and Order and the Rules Adopted Herein.

2. In order to encourage competition among carriers to develop and deploy new advanced services, it is critical that the marketplace for these services be conducive to investment, innovation, and meeting the needs of consumers. In this *First Report and Order*, we seek to ensure that all carriers have economic incentives to innovate and invest in new technologies.

3. We also adopt additional measures to further facilitate the development of competition in the advanced services market. First, we strengthen our collocation rules to reduce the costs and delays faced by competitors that seek to collocate equipment in an incumbent LEC's central office. We also adopt certain spectrum compatibility guidelines and adopt a *Further Notice of Proposed Rulemaking (FNPRM)* to explore issues related to developing long-term standards and practices for spectrum compatibility and management and line sharing. The issues which are the subject of the *FNPRM* will be discussed in a separate Initial Regulatory Flexibility Analysis.

II. Summary of Significant Issues Raised by Public Comments in Response to the IRFA.

4. In the IRFA, we stated that any rule changes would impose minimum burdens on small entities. We indicated that the collocation section of the *NPRM* proposed reporting requirements. The IRFA solicited comment on alternatives to our proposed rules that would minimize the impact they may have on small entities. In response we received comments from the Office of Advocacy, United States Small Business Administration (SBA) specifically directed to the IRFA. Specifically, SBA contends that the Commission's IRFA was inadequate because it failed to consider the effect of its proposed rules on small incumbent

²³⁰ See 5 U.S.C. § 603. The RFA, see 5 U.S.C. § 601 et. seq., has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

²³¹ See 5 U.S.C. § 604.

LECs.²³² While we continue to believe that incumbent LECs are dominant and therefore not "small" businesses within the meaning of the SBA, we include a discussion of the effect of the actions taken in this order on small incumbent LECs in order to remove any possible issue of RFA compliance.²³³ As noted in Part V of this FRFA, in making the determinations reflected in this order, we have given consideration to the SBA's comments, as well as comments of parties that generally addressed the impact of our proposed rules on small entities. We also do not agree with SBA's contention that our IRFA was not sufficiently detailed to generate "meaningful comments on the impact of the proposed rules."²³⁴ The comments of the SBA, the National Rural Telecom Association, and the Organization for the Promotion and Advancement of Small Telecommunications Companies, among others, provided more than sufficient detail for us to prepare this FRFA.

III. Description and Estimates of the Number of Small Entities Affected by the First Report and Order.

5. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the actions taken in this *First Report and Order*.²³⁵ The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."²³⁶ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.²³⁷ A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).²³⁸

6. Below, we further describe and estimate the number of small entities that may be affected by the decisions in this *First Report and Order*.

²³² Small Business Administration Comments at 6.

²³³ See *Local Competition First Report and Order*, 11 FCC Rcd at 16145, para. 1330.

²³⁴ SBA Comments at 7.

²³⁵ See 47 U.S.C. § 603(b)(3).

²³⁶ See 47 U.S.C. § 601(6).

²³⁷ 47 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 15 U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register." 5 U.S.C. § 601(3).

²³⁸ Small Business Act, 15 U.S.C. § 632 (1996).

7. The most reliable source of information regarding the total numbers of certain common carrier and related providers nationwide, as well as the numbers of commercial wireless entities, appears to be data the Commission publishes annually in its *Telecommunications Industry Revenue* report, regarding the Telecommunications Relay Service (TRS).²³⁹ According to data in the most recent report, there are 3,459 interstate carriers.²⁴⁰ These carriers include, *inter alia*, local exchange carriers (LECs), wireline carriers and service providers, interexchange carriers, competitive access providers, operator service providers, pay telephone operators, providers of telephone toll service, providers of telephone exchange service, and resellers.

8. The SBA has defined establishments engaged in providing "Telephone Communications, Except Radiotelephone" to be small businesses when they have no more than 1,500 employees.²⁴¹ Below, we discuss the total estimated number of telephone companies and small businesses in this category, and we then attempt to refine further those estimates.

9. Although some affected incumbent LECs may have 1,500 or fewer employees, we do not believe that such entities should be considered small entities within the meaning of the RFA because they are either dominant in their field of operations or are not independently owned and operated, and therefore by definition not "small entities" or "small business concerns" under the RFA. Accordingly, our use of the terms "small entities" and "small businesses" does not encompass small incumbent LECs. Out of an abundance of caution, however, for regulatory flexibility analysis purposes, we will separately consider small incumbent LECs within this analysis and use the term "small incumbent LECs" to refer to any incumbent LECs that arguably might be defined by the SBA as "small business concerns."²⁴²

10. Local Exchange Carriers. Neither the Commission nor the SBA has developed a definition for small LECs. The closest applicable definition under the SBA rules is for telephone communications companies other than radiotelephone (wireless) companies.²⁴³

²³⁹ FCC, *Telecommunications Industry Revenue: TRS Fund Worksheet Data, Figure 2 (Number of Carriers Paying Into the TRS Fund by Type of Carrier) (Nov. 1997) (Telecommunications Industry Revenue)*.

²⁴⁰ *Id.*

²⁴¹ 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) codes 4812 and 4813. See Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual* (1987).

²⁴² See 13 C.F.R. § 121.201, SIC code 4813. Since the time of the Commission's 1996 decision, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, First Report and Order*, 11 FCC Rcd 15499, 16144-45 (1996), 61 FR 45476 (August 29, 1996), the Commission has consistently addressed in its regulatory flexibility analyses the impact of its rules on such incumbent LECs.

²⁴³ *Id.*

According to the most recent *Telecommunications Industry Revenue* data, 1,371 carriers reported that they were engaged in the provision of local exchange services.²⁴⁴ We do not have data specifying the number of these carriers that are either dominant in their field of operations, are not independently owned and operated, or have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of LECs that would qualify as small business concerns under the SBA's definition. Consequently, we estimate that fewer than 1,371 providers of local exchange service are small entities or small incumbent LECs that may be affected by the proposed rules, if adopted.

11. Competitive LECs. Neither the Commission nor SBA has developed a definition of small entities specifically applicable to providers of competitive LECs. The closest applicable definition under the SBA rules is for telephone communications companies except radiotelephone (wireless) companies. The most reliable source of information regarding the number of competitive LECs nationwide is the data that we collect annually in connection with the TRS Worksheet. According to the most recent *Telecommunications Industry Revenue* data, 109 companies reported that they were engaged in the provision of either competitive local exchange service or competitive access service, which are placed together in the data.²⁴⁵ We do not have information on the number of carriers that are not independently owned and operated, nor have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of competitive LECs that would qualify as small business concerns under the SBA definition. Consequently, we estimate that there are fewer than 109 small competitive LECs or competitive access providers.

IV. Summary of Projected Reporting, Recordkeeping, and Other Compliance Requirements.

A. Collocation

12. We establish additional national rules for collocation. We require incumbent LECs to permit collocating carriers to construct their own cross-connect facilities between collocated equipment located on the incumbent's premises. An incumbent LEC that denies collocation of a competitor's equipment, citing safety standards, must provide to the competitive LEC within five business days a list of all equipment that the incumbent LEC locates within the premises in question, together with an affidavit attesting that all of that equipment meets or exceeds the safety standard that the incumbent LEC contends the competitor's equipment fails to meet. Incumbent LECs must provide specific collocation arrangements, consistent with the rules we outline below, at reasonable rates, terms, and conditions as are set by state commissions in conformity with the Act and our rules.

²⁴⁴ *Telecommunications Industry Revenue*, Figure 2.

²⁴⁵ *Id.*

13. Incumbent LECs must make shared collocation cages, cageless collocation, and adjacent controlled environmental huts, each with single-bay collocation arrangements, available to new entrants. Subject only to technical feasibility and certain security parameters, incumbent LECs must allow competitors to collocate in any unused space in the incumbent LEC's premises, without requiring the construction of a cage or similar structure, and without requiring the creation of a separate entrance to the competitor's collocation space. Incumbent LECs may not require competitors to use an intermediate interconnection arrangement in lieu of direct connection to the incumbent's network if technically feasible, because such intermediate points of interconnection simply increase collocation costs without a concomitant benefit to incumbents. Incumbent LECs must allow competitive LECs to have access to their collocated equipment 24 hours a day, seven days a week, without requiring a security escort or delaying a competitor's employees' entry into the incumbent LEC's premises.

14. Incumbent LECs must allocate space preparation, security measures, and other collocation charges on a pro-rated basis so the first collocater in a particular incumbent premises will not be responsible for the entire cost of site preparation. An incumbent LEC may not refuse to consider an application for collocation space submitted by a competitor while that competitor's state certification is pending, or before the competitor and incumbent LEC have entered into a final interconnection agreement. Incumbent LECs must permit representatives of a requesting telecommunications carrier that has been denied collocation due to space constraints to tour the entire premises in question. Upon request from a competitive LEC, an incumbent LEC must submit to the requesting carrier within ten days of the submission of the request a report indicating the incumbent LEC's available collocation space in a particular LEC premises. This report should specify the amount of collocation space available at each requested premises, the number of collocators, and any modifications in the use of the space since the last report. The report should also include measures that the incumbent LEC is taking to make additional space available for collocation. In addition to this reporting requirement, incumbent LECs must maintain a publicly available document, posted for viewing on the Internet, indicating all premises that are full, and must update such a document within ten days of the date at which a premises runs out of physical collocation space. Finally, incumbent LECs must remove obsolete unused equipment from their premises to increase the amount of space available for collocation.

B. Spectrum Compatibility

15. We establish certain spectrum compatibility guidelines in order to permit the safe deployment of xDSL and other advanced technologies. We determine that complying with these rules may require use of engineering, technical, operational, accounting, billing, and legal skills. However, we believe that incumbent LECs will already have these skills.

V. Steps Taken to Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Alternatives Considered.

A. Collocation

16. Incumbent LECs that deny competitive LECs collocation of certain equipment in a central office must provide the requesting carrier, within five business days, a list of all equipment the incumbent locates within the premises in question, together with an affidavit attesting that all the incumbent's equipment meets the safety standards that the incumbent contends the competitor's equipment fails to meet. In addition, an incumbent LEC must submit to the requesting carrier within ten days of the submission of the request a report indicating the incumbent LEC's available collocation space in a particular LEC premises. These requirements allow competitive LECs, who would otherwise have been unable to discover if incumbent LECs are imposing discriminatory standards, to determine what type of equipment incumbents will accept to be collocated, and further will allow competitive LECs to determine if incumbent LECs are discriminating in enforcing equipment requirements on competitive LECs but not on themselves. The burden in preparing these reports is minimum, because incumbent LECs already know what equipment they have in their offices, how much space they have available, and the way in which they apply their collocation standards.

17. Incumbent LECs that deny collocation for space reasons must allow competitive LECs to tour facilities. This requirement again provides proof of lack of space, and allows competitive LECs to gather evidence for presentation to state commission if there is a factual dispute regarding space availability. The burden on the incumbent LEC is minimum, because it can schedule tours when an employee is on site and available to give one.

18. An incumbent LEC must make public a document available on Internet that lists all its premises that have no more collocation space available, within 10 days of the time that the space fills up completely. This serves competitive LECs by telling them when an incumbent LEC office is full, so they need not apply for space. The burden on incumbent LECs is minimal, because an Internet site is easy and cheap to maintain, and all they are doing is making available information that they already know themselves.

19. An incumbent LEC must submit a report, within 10 days of receipt of a request for such a report, to a requesting competitive LEC indicating how much space is available in a particular incumbent LEC premises. This benefits competitive LECs by allowing them to find out if space is available without having to go through the lengthy and expensive application process. There is minimal burden on the incumbents because they already know the design of their own central offices and should be able to easily state how much space is available for collocation.

20. Incumbent LECs must remove obsolete unused equipment from their premises to create more collocation space. Such a requirement can result in the creation of more

collocation space in central offices that were previously without space. The burden on incumbent LECs is minimal, because if the equipment is obsolete and unused, the removal of such equipment will not affect the network operations of the incumbent.

B. Spectrum Compatibility

21. Incumbent LECs must make public the spectrum management guidelines and policies that they use to determine what services competitive LECs can provide over unbundled loops. This requirement benefits competitive LECs by ensuring they know what services they can provide over unbundled loops. There is a minimal burden to incumbent LECs, because they already know what spectrum management guidelines they are applying to their own network, and they are now simply required to make such information public.

VI. Report to Congress

22. The Commission will send a copy of the FIRST REPORT AND ORDER, including this FRFA, in a report to be sent to Congress pursuant to the Small Business Regulatory Enforcement Fairness Act of 1996, see 5 U.S.C. § 801(a)(1)(A). In addition, the Commission will send a copy of the FIRST REPORT AND ORDER, including FRFA, to

the Chief Counsel for Advocacy of the Small Business Administration. A copy of the FIRST REPORT AND ORDER and FRFA (or summaries thereof) will also be published in the Federal Register. See 5 U.S.C. § 604(b).

INITIAL REGULATORY FLEXIBILITY ANALYSIS

1. As required by the Regulatory Flexibility Act (RFA),²⁴⁶ the Commission has prepared this present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities by the policies and rules proposed in this Further Notice of Proposed Rulemaking. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the Further NPRM provided above in paragraph 111. The Commission will send a copy of the Further NPRM, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.²⁴⁷ In addition, the Further NPRM and IRFA (or summaries thereof) will be published in the Federal Register.²⁴⁸

I. Need for and Objectives of the Proposed Rule

2. The Commission is issuing the Further NPRM to seek comment on issues related to spectrum compatibility management. We ask commenters to consider whether the Commission should establish rules for deployment of central office equipment similar to those set forth in Part 68 of our rules. We also ask commenters to address the technical, operational, pricing, legal or policy ramifications of line sharing. We tentatively conclude that there are no technical, legal, regulatory or policy obstacles to line sharing among competing carriers. Further, we seek comment on our tentative conclusions that incumbent LECs must provide requesting carriers with unbundled access to the transmission frequencies above that used for analog voice service on any lines that LECs use to provide exchange service when the LEC itself provides both exchange and advanced services over a single line. We ask commenters to address any other technical problems that may arise in line sharing arrangements and to suggest remedies for such problems.

II. Legal Basis

3. The legal basis for any action that may be taken pursuant to the Further NPRM is contained in sections 1-4, 10, 201, 202, 251-254, 271, and 303(r) of the Communications Act as amended, 47 U.S.C. §§ 151-154, 160, 201, 202, 251-254, 271, and 303(r).

²⁴⁶ See 5 U.S.C. § 603. The RFA, see 5 U.S.C. § 601 et. seq., has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

²⁴⁷ See 5 U.S.C. § 603(a)

²⁴⁸ See *id.*

III. Description and Estimates of the Number of Small Entities Affected by the Further Notice of Proposed Rulemaking

4. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposals in this Further NPRM, if adopted.²⁴⁹ The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."²⁵⁰ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.²⁵¹ A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).²⁵²

5. Below, we further describe and estimate the number of small entities that may be affected by the proposals in this Further NPRM, if adopted.

6. The most reliable source of information regarding the total numbers of certain common carrier and related providers nationwide, as well as the numbers of commercial wireless entities, appears to be data the Commission publishes annually in its *Telecommunications Industry Revenue* report, regarding the Telecommunications Relay Service (TRS).²⁵³ According to data in the most recent report, there are 3,459 interstate carriers.²⁵⁴ These carriers include, *inter alia*, local exchange carriers (LECs), wireline carriers and service providers, interexchange carriers, competitive access providers, operator service providers, pay telephone operators, providers of telephone toll service, providers of telephone exchange service, and resellers.

²⁴⁹ See 47 U.S.C. § 603(b)(3).

²⁵⁰ See 47 U.S.C. § 601(6).

²⁵¹ 47 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 15 U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register." 5 U.S.C. § 601(3).

²⁵² Small Business Act, 15 U.S.C. § 632 (1996).

²⁵³ FCC, *Telecommunications Industry Revenue: TRS Fund Worksheet Data, Figure 2 (Number of Carriers Paying Into the TRS Fund by Type of Carrier)* (Nov. 1997) (*Telecommunications Industry Revenue*).

²⁵⁴ *Id.*

7. The SBA has defined establishments engaged in providing "Telephone Communications, Except Radiotelephone" to be small businesses when they have no more than 1,500 employees.²⁵⁵ Below, we discuss the total estimated number of telephone companies and small businesses in this category, and we then attempt to refine further those estimates.

8. Although some affected incumbent LEC may have 1,500 or fewer employees, we do not believe that such entities should be considered small entities within the meaning of the RFA because they are either dominant in their field of operations or are not independently owned and operated, and therefore by definition not "small entities" or "small business concerns" under the RFA. Accordingly, our use of the terms "small entities" and "small businesses" does not encompass small incumbent LECs. Out of an abundance of caution, however, for regulatory flexibility analysis purposes, we will separately consider small incumbent LECs within this analysis and use the term "small incumbent LECs" to refer to any incumbent LECs that arguably might be defined by the SBA as "small business concerns."²⁵⁶

9. Local Exchange Carriers. Neither the Commission nor the SBA has developed a definition for small LECs. The closest applicable definition under the SBA rules is for telephone communications companies other than radiotelephone (wireless) companies.²⁵⁷ According to the most recent *Telecommunications Industry Revenue* data, 1,371 carriers reported that they were engaged in the provision of local exchange services.²⁵⁸ We do not have data specifying the number of these carriers that are either dominant in their field of operations, are not independently owned and operated, or have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of LECs that would qualify as small business concerns under the SBA's definition. Consequently, we estimate that fewer than 1,371 providers of local exchange service are small entities or small incumbent LECs that may be affected by the proposed rules, if adopted.

²⁵⁵ 13 C.F.R. § 121.201, SIC codes 4812 and 4813. See Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual* (1987).

²⁵⁶ See 13 C.F.R. § 121.201, SIC code 4813. Since the time of the Commission's 1996 decision, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, First Report and Order*, 11 FCC Rcd 15499, 16144-45 (1996), 61 FR 45476 (August 29, 1996), the Commission has consistently addressed in its regulatory flexibility analyses the impact of its rules on such incumbent LECs.

²⁵⁷ *Id.*

²⁵⁸ *Telecommunications Industry Revenue*, Figure 2.

10. Competitive LECs. Neither the Commission nor SBA has developed a definition of small entities specifically applicable to providers of competitive LECs. The closest applicable definition under the SBA rules is for telephone communications companies except radiotelephone (wireless) companies. The most reliable source of information regarding the number of competitive LECs nationwide is the data that we collect annually in connection with the TRS Worksheet. According the most recent *Telecommunications Industry Revenue* data, 109 companies reported that they were engaged in the provision of either competitive local exchange service or competitive access service, which are placed together in the data.²⁵⁹ We do not have information on the number of carriers that are not independently owned and operated, nor have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of competitive LECs that would qualify as small business concerns under the SBA definition. Consequently, we estimate that there are fewer than 109 small competitive LECs or competitive access providers.

IV. Description of Projected Reporting, Recordkeeping and Other Compliance Requirements

11. We were unable to gather a sufficient record on the development of rules relating to procedures for equipment testing and compliance, so we seek additional comments on this issue. We are seeking comments on whether the Commission should establish rules for deployment of central office equipment similar to those set forth in Part 68 of our rules. We also ask commenters to address whether the Commission should be involved with the actual testing and compliance procedures or whether the industry is better suited to serve this function through the use of independent and accredited labs. We ask commenters to address any additional measures the Commission could take to ensure that spectrum compatibility and management concerns are resolved in a fair and expeditious manner. We seek comment on the level of demand for line sharing, and on technical and operational obstacles to sharing a single line between two service providers.

V. Significant Alternatives to Proposed Rule Which Minimize Significant Economic Impact on Small Entities and Small Incumbent LECs, and Accomplish Stated Objectives

12. In this Further NPRM, we seek to develop a record sufficient enough to adequately address issues related to developing long-term standards and practices for spectrum compatibility and management,²⁶⁰ and to the sharing of loops by multiple providers.²⁶¹ In

²⁵⁹ *Id.*

²⁶⁰ *See supra* paras. 78-91.

²⁶¹ *See supra* paras. 92-105.

addressing these issues, we seek to ensure that competing carriers, including small entity carriers, obtain access to inputs necessary to the provision of advanced services. We tentatively conclude that our proposals in the Further NPRM would impose minimum burdens on small entities. We seek comment on these proposals and the impact they may have on small entities.

VI. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rule

13. None.

**SEPARATE STATEMENT OF
COMMISSIONER HAROLD FURCHTGOTT-ROTH
DISSENTING IN PART**

Re: In the Matter of Deployment of Advanced Wireline Services Offering Advanced Telecommunications Capability; (CC Docket No. 98-147).

I support many aspects of this Order, but write separately to express several reservations. First, while I generally support the collocation requirements adopted here, I am concerned with the Commission's continuing establishment of additional rules or clarifications under Section 251. I believe that Congress had expected this agency to fully implement the Section 251 requirements expeditiously and then to allow the market to function without further government intervention. I hope that the collocation requirements adopted today will provide clear guidelines for local exchange carrier (LEC) interaction, and provide some level of certainty without the need for continuing government involvement.

In addition, I specifically dissent from the majority's decision to proceed with a Further Notice on line sharing at this time. We have not even asked what our new standard for the unbundling of network elements should be. I believe the Commission should first address the standard for unbundling network elements consistent with the Supreme Court's remand, prior to concluding, even tentatively, that we have the authority to require line sharing when one of the bases to make such a conclusion is that it is an unbundled network element. Moreover, it would have been preferable to have these issues addressed subsequent to or at least in conjunction with the UNE proceeding so that commenters could apply their proposed section 251(d)(2) standard to line sharing. Since the Commissioners had not even seen a draft of any item initiating the remand proceeding prior to adopting this Further Notice, the Further Notice and accompanying comment schedule is at best premature and may even prejudice issues that are more appropriately discussed in a comprehensive manner. I believe that in adopting this Further Notice the Commission has put the cart before the horse, especially since it has yet to release even a public notice seeking comment on the issues that were remanded to this agency almost two months ago.

**STATEMENT OF COMMISSIONER MICHAEL K. POWELL,
CONCURRING IN PART**

*Re: Deployment of Wireline Services Offering Advanced Telecommunications Capability
(CC Docket No. 98-147)*

I am pleased to support most aspects of this *Order and FNPRM* in their entirety because I agree that, by strengthening our collocation and related rules, we stand a better chance of promoting the development of facilities-based local competition in advanced services and telecommunications generally.

I cannot, however, support the majority's tentative conclusions in favor of mandating line sharing. Although I remain open-minded as to the appropriateness of such requirements, I think the tentative conclusions we adopt today are premature. First and foremost, I find it virtually impossible to separate this issue from that which is the subject of our upcoming proceeding to address the Supreme Court's vacation and remand of our unbundled network element Rule 319.²⁶² The Court has charged us with a very serious task, namely, that we determine anew the standards, pursuant to section 251(d)(2),²⁶³ that will be used to determine which network elements incumbent LECs must unbundle. As today's decision appears to concede, at least in part, the Rule 319 remand is inextricably intertwined with the issue of line sharing. Simply put, I believe that we must first establish and apply the section 251(d)(2) standard to determine whether loops must be unbundled *before* we make even tentative conclusions about whether some portion of that loop must also be unbundled or "shared." Further, I am skeptical that we can sidestep the hard work of establishing and applying a new section 251(d)(2) standard based on nondiscrimination or other provisions of the statute.

Second, as the many unanswered operational, cost allocation and other questions raised in the *FNPRM* suggest, too much is still unknown about the implications of line sharing. As a general matter, I feel we should make tentative conclusions only when we are more sure than not that the tentative conclusions should be the ultimate outcome. Although I

²⁶² AT&T Corp. v. Iowa Utils. Bd., 119 S. Ct. 721, 733-36 (1999).

²⁶³ 47 U.S.C. § 251(d)(2). Section 251(d)(2) provides:

[i]n determining what network elements should be made available for purposes of subsection (c)(3), the Commission shall consider, at a minimum, whether--(A) access to such network elements as are proprietary in nature is *necessary*; and (B) the failure to provide access to such network elements *would impair* the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer.

47 U.S.C. § 251(d)(2) (emphases added). The Supreme Court's remand requires that the Commission revisit the "necessary" and "impair" standards to give them meaningful effect.

fully recognize the many potential benefits of line sharing, the record is far from complete. As such, there may be many factors that weigh against line sharing that we do not yet know. Under these circumstances, I feel it is incumbent on me to reserve judgment entirely until a more fulsome record – covering both the advantages and drawbacks of line sharing – is before us. I reject, furthermore, the suggestion that such a record cannot be built on the excellent questions and observations made in the *FNPRM* unless we also make tentative conclusions. Although tentative conclusions may allow regulators to “send signals” as to how they will ultimately decide an issue, they add nothing from an evidentiary standpoint to a *FNPRM* of this caliber, in which the specificity of the proposals and discussion themselves is likely to lead to an adequately focused record. Thus, regretfully, I can only concur in the *FNPRM*’s discussion of line sharing.

In closing, I reiterate that my belief that the tentative conclusions on line sharing are premature says nothing about whether I believe we should, from a policy perspective, favor such requirements. This belief merely reflects that I have an open mind on this issue. Based on my participation in this action, I have no doubt that my colleagues are similarly open-minded. I also trust that, as we move forward in making it easier for competitive LECs to compete in the advanced services markets that we remain attentive to removing, whenever possible, the regulatory strictures that currently bind incumbent LECs. It is only by enabling *all* firms – incumbents and newer entrants alike – to compete in the market for advanced services that we stand a chance of achieving Congress’ vision of broadband deployment to all Americans.

**Separate Statement of
Commissioner Gloria Tristani**

*Re: Deployment of Wireline Services Offering Advanced Telecommunications Capability,
First Report and Order and Further Notice of Proposed Rulemaking.*

I strongly support the Commission's decision to adopt stronger collocation rules. These new rules will lower costs and reduce delays currently involved in the collocation process. By simplifying collocation for competitors, I hope we will hasten the deployment of advanced services.

In many areas, it has been new entrants that have been most responsive to end users' demand for bandwidth. And where competitors have gone, incumbents have quickly followed. So I am convinced that eliminating costly and time-consuming collocation requirements will accelerate the deployment of high-speed services by competitors and incumbents alike.

I am also pleased with the Commission's tentative conclusion that we should require line sharing by incumbent LECs. Line sharing refers to the practice of two carriers providing different services over a single loop. In the typical example, one carrier would provide voice-grade service while a second carrier, using a different frequency, would be able to transmit data over that same loop.

Today, if a competitor wants to provide high-speed data service to a customer, the competitor must purchase a separate line from the incumbent LEC and use it just for data. The competitor's purchase of stand-alone lines is a cost that the incumbent LEC does *not* incur if it seeks to win a customer for high-speed data service. Consequently, competitors today are at a potentially significant competitive cost disadvantage in the high-speed data market.

My strong support for both parts of today's decision is based largely on my desire to encourage the deployment of high-speed service to residential markets. Today, the business market is starting reap the benefits of competition among providers of high-speed data service. Residential markets, unfortunately, are much farther behind. The steps we take today could greatly enhance competitors' ability to serve residential markets.

I am told that, if high-speed data offerings are to gain a foothold in residential markets, the service must be priced lower than in business markets. Better collocation rules and line sharing, if ultimately adopted, will go far toward lowering the input costs for new providers of advanced services. I hope that a cost structure that is free of unreasonable impediments will accelerate competition in business markets *and* allow competitors to expand their footprints to include residential areas.